

## Meeting #8 Summary

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# THE MASSACHUSETTS DISTRIBUTED GENERATION INTERCONNECTION COLLABORATIVE

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Wednesday, January 29, 2003  
Room 102  
The Massachusetts Technology Collaborative  
Westboro, MA

**33 people attended the meeting, which began at 9:00 and ended at 4:15. See attached attendance list.**

### **I. Documents Distributed**

#### *Prior to the meeting*

- a. [Meeting Summary](#) from 1.17 Meeting – Raab Associates
- b. [Agenda](#) – Raab Associates
- c. [Radial Chapter](#) – Raab Associates
- d. [Network Chapter](#) – Raab Associates
- e. Draft Table of Contents – Raab Associates
- f. [ADR Proposal](#) – Suzanne Orenstein
- g. [Information Tracking and Annual Review proposal](#) – Suzanne Orenstein

#### *At the meeting*

- a. List of Provisions for a Legal Agreement Document - NStar

### **II. Opening Remarks**

Dr. Raab welcomed the Group and reviewed the Agenda for the day. He indicated that the meeting was largely intended to apprise the Group of the work being done in the Work Teams, and to provide the Work Teams with feedback on their proposals.

Dr. Raab also noted that with two plenary meetings remaining until the DTE's February 28 deadline, the Group needed to give some thought as to how it would structure its final report. Dr. Raab presented the Group with a proposed table of contents (see Box 1) for the report. The Group agreed that at this point the proposed table of contents seems to make sense, although some members indicated that it would be necessary to identify clearly which areas of the report are descriptive and which ones would go into a tariff. The Group later in the meeting agreed that the agreement should be in the form of a tariff and that this too would be an appendix to the report if it is completed in time.

**Box 1: Draft Table of Contents for DG Collaborative Final Report to DTE**

1. Transmittal Letter (From Raab Associates on Behalf of Collaborative)
2. Body of the Report
  - a. Introduction/Overview
  - b. Interconnection Goals/Principles (??)
  - c. Collaborative Process (including members, structure, number of mtgs)
  - d. Interconnection Process Narrative
  - e. Figure 1 and Notes to Figure 1
  - f. Network Discussion and figure 2
  - g. Timeframe and Fee Tables w/ footnotes
  - h. ADR Process
  - i. Forum for Periodic Review and Information Requirements
  - j. Endorsement Page (List organizations endorsing report, any exceptions on particular issues noted in text above)
3. Appendices:
  - a. Application Form
  - b. Agreement Forms(s)
  - c. Interconnection Requirements
  - d. Information Tracking Form
  - e. Network Challenges Discussion Paper

### **III. Review of ADR Process**

Suzanne Orenstein then led the Group through the ADR process proposal (see Appendix 1 for the proposal). She asked if the Group had any questions or objections to the steps or the sequencing of the steps.

Members posed several questions to the Work Team concerning the negotiation phase:

- ?? When does this step actually start and how does it start (e.g. through a telephone call or writing)?
- ?? What are the rules of elevation?
- ?? How does it conclude?

Members also discussed what the role of the DTE should be during this phase. Some Members suggested that the DTE should be present at the request of the Customer. The DTE could operate as an ombudsperson or perhaps as the shepherd/steward of the complaint process. Others disagreed that the DTE should be present at this stage. Ultimately the Group sent the issue of DTE involvement back to the Work Team.

Regarding the mediation/arbitration phase, some Members expressed concern over the costs associated with the phase. Specifically, noting that costs at this phase could render small projects uneconomical, they asked whether the DTE could assign someone to assist DG Customers at no cost to the Customer. Some Members also suggested a cost scoping step. One member of the Work Team pointed out that while the potential high cost might deter DG providers and customers from pursuing mediation, going to the DTE would deter the Companies – and hence all sides would have an incentive to settle any disputes through negotiation. Finally, the Work Team was asked to consider how, if at all, to incorporate DTE input into the process through the Collaborative.

The Group **agreed on the proposed framework** of having a negotiation phase, a mediation/arbitration phase, and then a DTE Adjudicatory Hearing, though it noted that several points are in need of further development such as the timeframes for each stage.

#### **IV. Discussion of the Legal Agreement**

Mary Grover, on behalf of the ADR/Agreement Work Team, recommended that the interconnection agreement be embodied in an interconnection tariff and distributed a list identifying items that should be included in the tariff (See Appendix 2). She indicated to the Group that a tariff should serve as the legal agreement between the Customer and the Company because tariffs are the normal vehicle by which the utilities do business with customers, FERC, and the DTE. The Group agreed to use a Tariff as the legal agreement.

Several thoughts emerged in the subsequent discussion on what form the tariff should take. The tariff should be consistent across all utilities. The Group also agreed that it needs to further explore whether there should be one tariff for all DG, separate tariffs for different classes of DG, or just different provisions or attachments within a single tariff with some differentiation by class of DG. The members agreed, however, that the Service Agreement, which would reference the terms of the Tariff, and the exhibits should be project specific. In particular, for Simplified applicants, the Tariff should be directly referenced on the application form if the form becomes the connection agreement. Another option is that the elements of the tariff that are clearly relevant to Simplified interconnections (such as indemnification) be pulled out or otherwise highlighted in a simplified agreement, where appropriate.

The Work Team will meet on Monday at NSTAR to talk more about the Tariff and ADR process.

#### **V. Information Tracking/Annual Review**

Working from the last draft of the Information Tracking Work Team's Proposal ([click](#) to view the red-line version developed at the Meeting, or see Appendix 3 below for the final version including edits made at the meeting), the Group refined the approach to tracking and reviewing progress on interconnections.

The Group agreed with the Work Team's recommendation to establish an on-going Collaborative over the next two years, meeting quarterly, to study the experience with interconnection in Massachusetts and the U.S. in an effort to further improve the interconnection process. The Group also discussed but did not reach closure upon when, if at all, to establish targets for further streamlining the process. However, it did agree that the goal of a more streamlined process with shorter timeframes and lower costs should be clearly stated in the final report. Jim Watts indicated that he would return to the Group with a proposal for how to address the target issue.

Building on the document's references regarding the continuation of the Collaborative, some Members recommended urging the DTE, DOER, ISO-NE, and the DEP to become more involved in the process (or, in the case of ISO-NE and DOER, to continue their involvement). The Group agreed that the Collaborative would report to the DTE at least annually on any important findings and recommendations. They further agreed that the Collaborative would have the option of recommending changes to the Interconnection Process after one year, if all agreed to specific improvements. Members agreed that it would be helpful if the meetings had facilitation and consulting support, but some noted that if funds were not available the Group could consider using a co-chair model and having personnel from member organizations do all the preparatory and follow up work. Participants noted that the parties themselves, the DOE, and the MTC might be potential sources of funding for facilitation and consulting support

Moving to the Data Tracking segment of the proposal, the Group referred to a spreadsheet proposed by Tim Roughan of National Grid ([click](#) to view) outlining the information that the utilities would capture. The Group reviewed the proposal and one or more members suggested that the following additional data be tracked by the utilities:

- ?? The date the generator went online.
- ?? The DG type (inverter, synchronous, or induction)
- ?? The answer to the question on the application regarding the project's air quality permit application status.
- ?? Whether the project went to step 2 or 3 of ADR.
- ?? Whether upgrades to the customer's facilities were necessary.
- ?? Which screens were passed.
- ?? The location of the projects, as well as information regarding non-DG sources (ISO request).
- ?? Professional person-hours needed to conduct supplemental review.

The Group did not agree to add all these fields, and in fact, some argued that many should not be added. It was decided to let the Working Team review each of the recommendations.

The Work Team had proposed that the information from the data tracking be shared with the Collaborative, and DTE, at regular intervals, most likely annually. Some members requested quarterly reports to the Collaborative, but this proposal was not agreed to by all. The Work Team will continue to discuss how often the aggregated data will be reviewed by the Collaborative.

The Group then discussed using an additional worksheet for the evaluation of the screens. There was no agreement about whether such a worksheet should be used.

The Group also discussed the Confidentiality segment of the proposed data tracking system. Members suggested that project information be aggregated and certain information not shared (e.g., name, address, and possibly notes) in order to ensure confidentiality while at the same time providing useful interconnection information. The Group also discussed the best way to word a confidentiality checkoff on the application

as well as how this would dovetail with any confidentiality language in the tariff/agreement. The Group discussed but did not reach resolution on what will happen if the customer does not agree to release information. The Work Team agreed to take this up again.

## **VI. Discussion on the Radial Chapter**

Following a short break for lunch, the Group reviewed the Radial Chapter as developed by the Radial Work Team. Dr. Raab reviewed the Narrative and the Group made some minor edits and agreed that Dr. Raab should continue to update the narrative as changes are made ([click](#) to view the red-line version developed at the meeting). The Group approved the change of the rounded box in the place of the cloud, in addition to making some additional changes to Figure 1 to enhance its clarity (e.g., combining screens 4-8 in one box ).

Moving to the cost table, the Group decided to insert instructions with the application fee indicating that the customer should not pay anything if it believes it qualifies for the Simplified Process, and \$300 initially otherwise. After its initial review of the application, the utility will let the customer know what the appropriate fee is based on which review process it falls and the size of the proposed facility.

The Group revisited the Proposal on Environmental Issues drafted by the Union of Concerned Scientists et al. (see Appendix 4). The Group recommended that the application form include a question about whether the applicant needs an air permit (yes/no/don't know). If they don't know, they are told to contact the DEP to obtain the relevant permitting information and given the DEP's contact information. There would also be a note on the application that clearly indicates that the project information will be shared with the DTE and the DEP. The utilities only need to make sure that the applicant checked off one of the boxes. Finally, the Group agree to recommend to the DTE that it convey the utilities annual DG filings with the DEP.

The Group visited the issue of how to treat confidentiality. It recommended that information be aggregated to protect the confidentiality of specific projects. In order to improve the specificity of the information, a line item in the application form could read "I agree to allow information regarding the processing of my application to be aggregated with other applicants (without my name or address) for use by the Massachusetts Collaborative tasked with exploring ways to further expedite future interconnections", to which the Customer could reply "yes" or "no".

Stan Blazewicz highlighted the changes Navigant has made to the Interconnection Requirements contained in Exhibit 3 of the Utilities' Joint Proposed Interconnection Standards under the supervision of the Radial Work Team. He noted that some areas of the Standards will likely overlap with the items identified for inclusion in the Tariff. He also noted that Navigant had proposed compressing the size classification from five categories to two, with the division between the two set at 10 kW. The utilities indicated that they would like to review the safeguards in the new document to ensure that no

further categorization would be necessary. They will star areas in which safeguards according to size will be necessary and the Group will consider how best to incorporate them (i.e, using more than two overall classifications, or simply having two or more size related requirements for certain protections within the two-tier system). In the meantime, Navigant will make the revisions proposed by the Radial Work Team using the two-tier structure and make a draft available for circulation by Monday. The utilities also agreed to reach agreement on the few requirement issues they had not yet resolved. The Radial Team will revisit the document at its next meeting on Tuesday.

## **VII. Discussion of the Network Chapter**

The Group then reviewed the Network Chapter developed by the Network Work Team. Dr. Raab first focused the Group's attention to the expedited interconnections schematic. The Group decided to take the 1<sup>st</sup> box off the figure and insert it into the Narrative, since the provision would apply to all interconnections, not just Network. It also debated whether it was necessary to have the 10kW screen if the 1/15 of minimum load screen is also used. The Group ultimately agreed to leave the schematic as-is with the two screens as specified plus a commitment to continue to explore expanding what qualifies for Expedited review on networks over time.

The Group also looked at the time and cost schedules for Network Interconnections (contained in the radial document) and agreed to the recommendations from the Work Team (40 days maximum when load data can be estimated and 100 days when metering is necessary, plus \$100 application fee for systems less than or equal to 3 kw, and \$300 for those above 3 kw up to 10 kw). The Group also noted that notes 1 and 3 on Table 2 were be redundant and that one may need to be eliminated.

One Member explained that he felt that Navigant's network description, while technically accurate, overstates the negative impact of DG on network systems. He will send an edited version for Navigant to review in developing the next draft. Lastly, the Group agreed that Navigant's network attachment should be even more technical and comprehensive, and a subcommittee agreed to get together on Monday to develop a detailed outline for this piece.

## **VIII. Next Steps**

Before adjourning the Group developed the following To-Do list for the next round of Work Team meetings and the next plenary session. It also agreed to have a two-day meeting at the MTC on February 13, starting at 12:30 p.m, and February 14 all day.

### **To-do:**

Meetings Scheduled:

?? 12:30 on Feb. 13, and all-day Feb.14 for two-day meeting at Weiss Room 102 at MTC

?? Radial meeting February 4<sup>th</sup> ,1:00 p.m., Weiss Room 102 at MTC

?? Network meeting February 7<sup>th</sup> , 9 a.m., Weiss Room 102 at MTC

?? ADR meeting February 3<sup>rd</sup> 11-3 at NStar

?? Information Tracking Group Meeting February 11, 9:30 a.m. to 2 p.m. at MTC  
Conf. Room 1

Documents for Circulation:

?? Interconnection Requirements (Friday) – Navigant

?? Network Items (Wednesday) – Navigant

?? Agendas for 4 Work Team meetings – Raab Associates

?? Meeting Summary – Raab Associates

## Appendix 1: Draft Proposal for Dispute Resolution Steps

*The Work Group has not reached agreement on this proposal and will continue to discuss and refine it. Agreement on the specific steps is contingent upon agreement on the proposal as a whole.*

1. Negotiation, with elevation on all sides to VP or management with sufficient authority to make a decision (14-21 days<sup>1</sup>)
2. Mediation/Non-binding Arbitration
  - ?? DG Collaborative develops pre-qualified lists of mediators and technical experts and submits to the DTE.
  - ?? One party to the dispute requests DR assistance in writing, with summary of situation. Other party can also submit summary.
  - ?? DTE distributes list of qualified neutrals and manages strike out process to select individual(s) for case
  - ?? If either party requests a technical expert, both a mediator and a technical expert will be selected.
  - ?? Parties complete neutral selection process with DTE in 7 days.
  - ?? DTE arranges for selected mediator to contact parties
  - ?? Parties contract with neutrals for services, splitting fees 50/50.
  - ?? Neutral(s) discusses case with disputing parties to assess scope of issues, understand positions and interests, and establishes schedule for completion
  - ?? Mediation meeting or meetings are held.
  - ?? If parties reach agreement, dispute resolution process ends here.
  - ?? If parties do not reach mediated agreement, neutral(s) issue brief recommended solution or decision.
  - ?? If parties accept neutral recommendation, dispute resolution process ends here.
  - ?? If one or both parties do not accept neutral recommendation and there is still no agreement, dispute proceeds to Step 3.
3. DTE Adjudicatory Hearing

Standard adjudicatory hearing at DTE, with witnesses, evidence, etc. DTE issues a binding decision, appealable to the SJC. Parties attempt to create expedited schedule in initial procedural conference. Collaborative to recommend to DTE a deadline for completion of the hearing process. [Work group will review DTE procedural rules to develop a recommendation for this deadline.]

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<sup>1</sup> All days are calendar days. Range of days indicates lack of agreement within group on maximum # of days.



## **Appendix 2: Items to be included in the Interconnection Tariff**

1. Preamble
2. Definitions
3. Basic understandings
4. Process overview (screens, timelines, costs, etc.)
5. Responsibilities of parties
6. Technical requirements
7. Maintenance requirements
8. Testing and post-energization inspections
9. Access and control (under emergency and standard operating conditions)
10. Metering and related equipment
11. Cost responsibilities
12. Authorizations required prior to energization
13. Term and termination
14. Billing and payment
15. Security and creditworthiness
16. Milestones
17. Disconnection resulting from: (i) maintenance, (ii) forced outages or (iii) adverse operating effects
18. Assignment
19. Treatment of confidential information
20. Insurance
21. Indemnification and Limitation of Liability
22. Force majeure
23. Notice and communications
24. Exhibits
  - a. Service Agreement
    - ?? Attachment 1: Description of facilities
    - ?? Attachment 2: System upgrades
    - ?? Attachment 3: Costs of upgrades
    - ?? Attachment 4: Special operating requirements, if any
  - b. Application
    - ?? Includes initial review of proposal
  - c. Supplemental Review Costs Agreement
  - d. Impact Study Agreement
  - e. Facility Study Agreement

## Appendix 3: Annual Review and Information Tracking Proposal<sup>2</sup>

### Goals for Information Tracking and Progress Review

DG Collaborative members have agreed, based on projections of future needs and capabilities, to components of a system to streamline DG interconnection procedures. All Collaborative parties agree that, because DG is an emerging interconnection arena, there is limited experience with the screens, time lines, and cost estimates that are part of the recommended interconnection process. Many parties in the Collaborative agreed to the recommended interconnection process on condition that a process be developed to assess the efficiency and effectiveness of the process and to work together in the future to create the most reliable, safe and efficient system for all parties. Thus, the Collaborative as a whole recommends a two-year review process for DG interconnection experiences under the Collaborative recommended procedures.

Collaborative members further agree to gather and aggregate project specific information to provide data on which to evaluate the effectiveness of the proposed system. This data may also be valuable to others interested in DG interconnections, including relevant agencies (e.g. DEP) and organizations (e.g. ISO-NE).

### Forum for Periodic Review

Given the conditional nature of the agreements among the Collaborative parties, they request that the DTE issue an Interim Order in response to the Collaborative Report. [Move to Front?] In the two years following the issuance of this order, the Collaborative parties will meet quarterly to exchange information about DG interconnection experiences and technological developments. After one year of experience and again after two years, the Collaborative, at its option, may request modifications in the Interim Order so that it can begin to implement any necessary adjustments, improvements and streamlining that all can support at that time. It may also at this time consider targets for further streamlining beyond the two-year period covered by the Interim Order. [At the end of the first year the Collaborative will endeavor to establish targets for what it can achieve in year 2.] There will be a request for a final order at the end of 2 years.

### Data Tracking

The utility participants in the DG Collaborative have agreed to track certain information on the processing of each application for DG interconnection and to compile that specific information on a quarterly basis for presentation and discussion with other Collaborative members. The tracking system will be standard for all electric utility companies in MA, will be aggregated across the utilities [by whom?] and average costs and processing times<sup>3</sup> will be calculated. A report of this information will be shared with Collaborative members and it is also anticipated that this information will be posted on the Collaborative web site for access and review by others.

The application and project tracking system has been reviewed in the Collaborative process, and was designed to meet the needs of all parties. Included in this tracking system are **the following elements:**

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<sup>2</sup> Developed by Information and Annual Review Work Team. Members contributing to proposal: Gerry Bingham, Steve Cowell, Dave Dishaw, Roger Freeman, Sam Nutter, Tim Roughan, Henry Yoshimura

<sup>3</sup> The quarterly reports will include information about all applications, not just those completed.

- ?? Project identification number
- ?? Size of project
- ?? Fuel source
- ?? Whether the project is on a radial, spot network, or area network system
- ?? Generator type (i.e. inverter, induction, synchronous)
- ?? Time involved in processing each stage of the application
- ?? Which screens were used and passed or failed for the application
- ?? Total time for processing the application
- ?? Person-hours required by the utility to complete the processing of the application
- ?? Date contract is sent to customer, date project is approved, and date project goes on line
- ?? Details of any supplemental review process, including time in days and in person-hours
- ?? For standard review projects, time requirements for impact studies and facility studies
- ?? Additional notes supplementing information about any of the above. The notes may include information about the system modifications that may be required and their costs, the scope of any supplemental review, costs of facility and impact studies, and other project specific details.

In addition to tracking the processing of each application, the utilities and DG developers have developed a worksheet that will be used to track each project's progress through the screens used to identify simplified and expedited interconnections. Information on this worksheet can include data on the types of studies required by the supplemental review process, and information about which screens posed challenges for specific projects. The information from the screen worksheet will be communicated to the applicant, and remain in the application file to provide background information about the use of the screens as needed.

#### Confidentiality Protections.

The information disseminated to the DG Collaborative and others will not include any identifying information (name, address, etc.) and will not be held confidential. [The applicant will be notified by a statement on the application form that certain basic process timing information will be aggregated and subject to review for the purpose of analyzing and improving the interconnection process] (this section needs further discussion among the Work Team). The DG developers have requested the option of requesting that the notes on a specific project be kept confidential to protect confidential business information. The utilities do not object to this option, as long as the burden is on the DG developer to make a clear request for the Confidential Business Information option.

## **Appendix 4: Proposal on Environmental Issues for DG Interconnection Collaborative Revision II**

DTE should coordinate its interconnection procedures with the Department of Environmental Protection ("DEP") in order to ensure that newly interconnected DG facilities have or obtain all necessary operating permits. .

With respect to interconnection application procedures, participants in the DG Collaborative recommend the following:

- ?? DTE should require DG owner/operators to provide information on any on-site generators to the interconnecting utility at the time of application documenting that its DG units have obtained or applied for an operating permit from DEP. In the absence of either of these, the interconnection applicant must demonstrate that its units do not require an operating permit with a written waiver from the DEP. An illustrative draft of the information to be included in the interconnection application is in Appendix X (attached).
- ?? DTE should work collaboratively with DEP, DG owner/operators, and others to develop a user-friendly interface and process for interconnection applicants to expedite processing of requests for permits and waivers (for those without permits).
- ?? Interconnecting utilities should not activate an interconnection of a DG facility that has not received an operating permit or a waiver.
- ?? DEP should be included in the interconnection program evaluation process.

### DG Interconnection Application Information regarding Operating Permits

Your application can be deemed complete only after you: (1) have or applied for an operating permit from DEP; or (2) have a written statement from the DEP that you have obtained a waiver from DEP confirming that your facility does not require an operating permit.

All applications for interconnection would include the following question:

- ?? Does the interconnected DG facility require an operating permit under DEP air quality regulations?

If you answered "yes," please attach a copy of the approved operating permit or your operating permit application to your interconnection application.

If you answered "no" or if you are not sure whether your interconnected DG facility has or requires a permit, then you must contact DEP.

For each interconnected DG facility without a permit, the DEP will likely require the following information in order to issue a waiver:

Owner of the unit  
Location of the unit (address)  
Manufacturer  
Model number  
Date of manufacture/purchase (if known)

Heat input capacity

Electrical output capacity (KW)

Fuel type(s)

Current use: Emergency only or Other

Current (or expected) annual hours of operation: 0-500, 500 +

## Appendix 1: Attendance

Organization	Name	1/10	1/16	1/29
<b>DG PROVIDERS</b>				
Aegis Energy Services	Spiro Vardakas	X		X
SEBANE	Steve Cowell	X		X
SEBANE (alternate)	Ed Kern	X	X	
SEBANE/Zapotec (alternate)	Paul Lyons	X		
E-Cubed	Peter Chamberlain	X	X	X
E-Cubed (alternate)	Ruben Brown	X		
Ingersoll-Rand	Jim Watts	X	X	X
Ingersoll-Rand (alternate)	Jim Avery	X		
Ingersoll-Rand (alternate)	Tim O'Connell	X		
NAESCO	Don Gilligan			
Northeast CHP Initiative	Sean Casten	X	X	X
Turbosteam	Tim Walsh	X		
NECA	Larry Plitch			
NECA (alternate)	Tobey Winters			
Real Energy	Roger Freeman	X	X	
Real Energy (alternate)	Tim Daniels	X	X	X
UTC	Herb Healy	X	X	X
UTC (alternate)	Heather Hunt			
Keyspan	Pat Crowe			
Keyspan	Joe Niemiec	X		X
Keyspan	Chuck Berry		X	X
Keyspan	Rich Johnson			X
Plug Power	Lisa Potter			
Plug Power	Rudy Stegemoeller			
Trigen Energy	Dave Doucette			
<b>GOVERNMENT/QUASI GOVERNMENT</b>				
DOER	Dwayne Breger			
DOER (alternate)	Gerry Bingham	X	X	X
DOER (alternate)	David Rand			
MTC	Sam Nutter	X	X	X
MTC (alternate)	Judy Silvia			
MTC (alternate)	Raphael Herz	X		
MTC (alternate)	Fran Cummings	X	X	X
MTC (alternate)	Quincy Vale		X	
Attorney General's office	Joseph Rogers			
Attorney General's office	Judith Laster			
Attorney General's office	Patricia Kelley			
Cape Light Compact	Margaret Downey			
Cape Light Compact	Kitt Johnson	X		
DEM				
DTE	Paul Afonso			
<b>CONSUMERS</b>				

AIM	Angie O'Connor			
for Solutia and MeadWestVac Co.	Andy Newman			
for Wyeth	Lisa Barton			
for Wyeth	Susan Richter		X	X
<b>UTILITIES</b>				
Unitil/FG&E	John Bonazoli	X	X	
Unitil/FG&E (alternate)	Justin Eisfeller			X
ISO-NE	Henry Yoshimura			
ISO-NE (alternate)	Carolyn O'Connor			X
ISO-NE (2 <sup>nd</sup> Alternate)	Eric Krathwohl			
NSTAR	Larry Gelbien	X	X	X
NSTAR (alternate)	Dave Dishaw	X	X	X
NSTAR (alternate)	Mary Grover	X	X	X
NSTAR (alternate)	Dan Butterfield	X	X	X
WMECO/NU	Doug Clarke	X	X	X
WMECO/NU (alternate)	Mary Duggan	X		?
WMECO/NU (alternate)	Cindy Janke	X	X	X
WMECO/NU (alternate)	Steve Klionsky	X		
WMECO/NU (alternate)	Rich Towsley			
WMECO/NU (alternate)	Steve Gibelli			X
WMECO/NU (alternate)	Leo Rancourt	X	X	X
NGRID	Tim Roughan	X	X	X
NGRID (alternate)	John Bzura	X	X	X
NGRID (alternate)	Mary Grover	X		X
NGRID (alternate)	Amy Rabinowitz	X		X
NGRID (alternate)	Peter Zschokke	X		
<b>PUBLIC INTEREST GROUPS</b>				
UCS, MassPIRG, and CLF	Deborah Donovan	X		X
UCS, MassPIRG, and CLF	Frank Gorke			
UCS, MassPIRG, and CLF	Seth Kaplan			
Mass Energy Consumers Alliance	Larry Chretien	X		
Mass Energy Consumers Alliance	Leslie Grossman			
<b>COLLABORATIVE TEAM</b>				
Raab Associates	Jonathan Raab	X	X	X
Raab Associates	Joel Fetter	X	X	X
Raab Associates	Colin Rule	X	X	
Facilitation Consultant	Suzanne Orenstien	X	X	X
Navigant Consulting	Stan Blazewicz	X	X	X
Navigant Consulting	Eugene Shlatz	X		
<b>OTHER</b>				
Unaffiliated	Bill Feero	X		